

(21)

$$1) \quad n + d + q = 75$$

$$2) \quad .05n + .1d + .25q = 7.25$$

$$3) \quad 5n = d$$

Ans: 50 nickels

10 dimes

15 quarters

MATRICES (sect. 4)

MATRIX: A rectangular array of numbers.

$$A = \begin{bmatrix} 2 & 3 & 4 \\ 5 & 6 & 7 \end{bmatrix} \quad \begin{matrix} 2 \times 3 \\ \text{rows} \quad \text{columns} \end{matrix}$$

Write A as a

$$3 \times 2 \text{ matrix}; A = \begin{matrix} & \text{col 1} & \text{col 2} \\ \text{row 1} & 2 & 5 \\ \text{row 2} & 3 & 6 \\ \text{row 3} & 4 & 7 \end{matrix} = \begin{bmatrix} 5 & 2 \\ 6 & 3 \\ 7 & 4 \end{bmatrix}$$

matrix element: each number in the matrix.

described as: $a_{\text{row column}}$

$$a_{12} = 5, \quad a_{22} = 6, \quad a_{41} = X$$

	Pacific	Mountain	Central	Eastern
Men	2	5	2	4
Women	2	0	1	10

Adding / Subtracting Matrices

$$A = \begin{bmatrix} 2 & 3 & 4 \\ 5 & 6 & 7 \end{bmatrix} \text{ and } B = \begin{bmatrix} 9 & 7 & 5 \\ 3 & -2 & -1 \end{bmatrix}$$

$$A + B = \begin{bmatrix} 11 & 10 & 9 \\ 8 & 4 & 6 \end{bmatrix}$$

What if rows & columns don't match

Answer: Cannot be done!

Solve Matrix:

$$\begin{aligned} x + 1 &= 2 \\ -1 & \quad -1 \\ x &= 1 \end{aligned}$$

$$X \begin{matrix} + \\ \ominus \end{matrix} \begin{bmatrix} 1 & 1 \\ 3 & 2 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ 8 & 9 \end{bmatrix}$$

Solve for x :

$$X = \begin{bmatrix} 1 & 2 \\ 11 & 11 \end{bmatrix}$$

$$X = \begin{bmatrix} -1 & 0 \\ 5 & 7 \end{bmatrix}$$

Solve: $\begin{bmatrix} 2x-5 & 4 \\ 3 & 3y+12 \end{bmatrix} = \begin{bmatrix} 25 & 4 \\ 3 & y+18 \end{bmatrix}$

solve for x & y :

$$2x-5=25$$

$$3y+12=y+18$$

Sect. 4.1 P.170
 HW: 1, 2, 6-12

① → 27
 ② → 14, 18

→ 33, 35

Sect. 4.2 P.178

4, 7, 10

① → 29, 30
 ② → 11, 13, 17

① I got this!

② Need a little more.